

### REMARKS

Claims 1-3 and 7 are pending. Claim 1 has been amended to recite that the cell dispersing agent is free from animal-origin components and is a protease originated from a plant, a protease originated from genetically recombinant bacteria, or a combination thereof. Support for this amendment can be found in the specification at, for example, paragraph 97.

#### Sequence Compliance

According to the Examiner, the sequence listings and computer readable forms submitted on July 27, 2006 and May 6, 2010 are defective. In response, the specification has been amended to insert the required SEQ ID NO identifier associated with a single listed sequence, to correct various typographical errors, as well as to incorporate by reference the Sequence Listing filed concurrently herewith. Furthermore, Examiner states that, *"Applicant is required to add SEQ ID NO to the sequences listed in the specification on page 8..."*. Applicants contend that all required sequences on page 8 have been identified, and therefore, respectfully request removal of said objection.

#### Rejection under 35 U.S.C. § 103(a)

Claims 1-3 and 7 have been rejected under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 6,214,618 (Hillegas) in view of U.S. Patent No. 6,184,348 (Ferrari). According to the Examiner, Hillegas teaches methods for producing herpes virus comprising adhering cells to a microcarrier support comprising multiple copies of the cell attachment ligand Arg Gly Asp (RGD) and the ProNectin F Peptide. Further, according to the Examiner, the Hillegas method comprises culturing the adhesive cells in a medium free of animal origin components, subculturing the cells using dispersing agents such as EDTA or trypsin, and inoculating and proliferating the virus in the

cells. The Examiner acknowledges that Hillegas does not teach the sequence Gly Ala Gly Ala Gly Ser (GAGAGS) and the number-average molecular weight.

According to the Examiner, Ferrari teaches polymer peptides Gly Ala Gly Ala Gly Ser (GAGAGS) and Arg Gly Asp (RGD), that such sequences are cell growth and attachment factors, and molecular weights of polymers comprised of such sequences. The Examiner states that it would have been obvious to modify the microcarrier support of Hillegas to comprise the polymer polypeptides of Ferrari because Ferrari teaches that the GAGAGS and RGD polypeptides are cell growth and attachment factors.

Applicants respectfully traverse this rejection. Hillegas discloses “EDTA/trypsin”. See, e.g., Hillegas, col. 6, ll. 44-48; col. 7, ll. 20-22; and col. 7, ll. 55-58. The instant claims require “a cell dispersing agent that is free from animal-origin components and is a protease originated from a plant, a protease originated from genetically recombinant bacteria, or a combination thereof.” In 1999, when Hillegas was filed, trypsin was known to be of animal origin. See, Murakami and Sugawara, Introduction to Cell Engineering, (Corona Publishing Co., Ltd., 1994) p. 68 (disclosed in accompanying IDS with English translation); The Japanese Tissue Culture Association, Tissue Culture Techniques (Asakura Publishing Co., Ltd. 1999), p. 23 (disclosed in accompanying IDS with English translation). Further, animal-origin trypsin was in use as late as 2003. See specification, p. 2, ll. 24-32 (In reference to Kistner et al., poster presented at Options for Control of Influenza V, Okinawa, Japan, October 7-11, 2003: “[F]or the subculture of cells in Non-Patent Document 1, an animal-origin protease (such as pig-origin trypsin) is used as a cell dispersing agent.”). One of ordinary skill in the art would have understood that the trypsin disclosed in Hillegas was of animal-origin. Ferrari does not disclose or suggest the missing teaching of a cell dispersing agent that is free from animal-origin components. Thus, no combination of the

references teaches the claimed cell dispersing agent. Accordingly, this rejection should be withdrawn.

**CONCLUSION**

It is believed that all pending claims and the application are now in condition for allowance. If any issues remain which may be resolved by a Supplemental Amendment or by an Examiner's Amendment, the Examiner is respectfully requested to contact the undersigned.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 associated with Customer No. 20277 and please credit any excess fees to such deposit account.

Respectfully submitted,  
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